PATENT NO.

: 7,364,876 B2

Page 1 of 39

APPLICATION NO.: 10/644084

DATED

: April 29, 2008

INVENTOR(S)

: Takai et al.

It is certified that error appears in the above-identified patent and that said Letters Patent is hereby corrected as shown below:

At column 6, line 10, delete "Functional" and insert therefor -- Junctional--.

At column 11, line 7, delete "MADIP-M" and insert therefor --mADIP-M--.

At column 13, line 55, delete "acids" and insert therefor --acid-- and delete "the an" and insert therefor -- an--.

At column 14, line 57, delete "Examples" and insert therefor -- Example--.

At column 18, line 3, delete "ascites is" and insert therefor --ascites are--.

At column 19, line 15, delete "myocaroditis" and insert therefor --myocarditis--; and line 63, delete "myocaroditis" and insert therefor --myocarditis--.

At column 20, line 52, delete "DNAS" and insert therefor -- DNAs--.

At column 25, line 34, delete "nectin-2α-AC-L cells" and insert therefor --nectin- $2\alpha$ - $\Delta$ C-L cells--.

At column 26, line 43, delete "MADIP" and insert therefor --mADIP--.

At column 28, line 50, delete "MBP-MADIP" and insert therefor --MBP-mADIP--.

At column 30, line 16, delete "j. Cell Biol." and insert therefor -- J. Cell Biol.--; and lines 34-35, delete "nectin- $2\alpha$ - $\alpha$ C-L cells" and insert therefor --nectin- $2\alpha$ - $\Delta$ C-L cells--.

At column 31, line 2, delete "concentrated" and insert therefor --concentrate--.

At column 33, lines 41-42, delete "2 mM Ca" and insert therefor --2 mM Ca<sup>2+</sup>--.

PATENT NO.

: 7,364,876 B2

Page 2 of 39

APPLICATION NO.: 10/644084

**DATED** 

: April 29, 2008

INVENTOR(S)

: Takai et al.

It is certified that error appears in the above-identified patent and that said Letters Patent is hereby corrected as shown below:

At column 35 through column 54, please delete the sequence listing and insert therefor the following sequence listing:

#### SEQUENCE LISTING

<110> EISAI CO., LTD.

<120> ADIP PROTEIN AND USE THEREOF

<130> 2144.0100000

<140> US 10/644,084

<141> 2003-08-20

JP 2002-284263 <150>

<151> 2002-09-27

<160>

<170> PatentIn version 3.3

PATENT NO.

: 7,364,876 B2

Page 3 of 39

APPLICATION NO.: 10/644084

**DATED** 

: April 29, 2008

INVENTOR(S)

: Takai et al.

<210> 1	
<211> 2692	
<212> DNA	
<213> Mus musculus	
<220>	
<221> CDS	
<222> (80)(1927)	
<pre>&lt;223&gt; /note="afadin-and alpha-actinin-binding protein"</pre>	
<400> 1	
cgtaggagag tgacaggagc tgttgtaagc gtcgcagcac tgagccgcct cctcaggt	at 60
cctggctctg gaacttgct atg gga gat tgg atg act gtg aca gat cca gt	
Met Gly Asp Trp Met Thr Val Thr Asp Pro Va	1
1 5 10	
ata tat asa asa asa asa asa asa babasa tat	
ctg tgt aca gaa aac aaa aat ctc tct caa tat acc tca gaa aca aag	160
Leu Cys Thr Glu Asn Lys Asn Leu Ser Gln Tyr Thr Ser Glu Thr Lys	
15 20 25	
atg tot cog too agt tig tac too cag caa git cig igo tot toa gia	000
Met Ser Pro Ser Ser Leu Tyr Ser Gln Gln Val Leu Cys Ser Ser Val	208
30 35 40	
cct tta tcc aaa aac gtg cat ggt gtt ttc ggt gtc ttc tgc aca gga	256
Pro Leu Ser Lys Asn Val His Gly Val Phe Gly Val Phe Cys Thr Gly	256
and the case of th	

PATENT NO.

: 7,364,876 B2

Page 4 of 39

**APPLICATION NO. : 10/644084** 

**DATED** INVENTOR(S) : April 29, 2008 : Takai et al.

						att Ile									304
						tat Tyr									352
-	_				-	gct Ala	-	_		-	_			_	400
		-		-		ctg Leu	_	-	_		-				 448
	_	_	-		_	gac Asp 130	_	_		_	_	-	-		 496

PATENT NO.

: 7,364,876 B2

Page 5 of 39

APPLICATION NO.: 10/644084

DATED

: April 29, 2008

INVENTOR(S)

: Takai et al.

aaa Lys 140	Leu	aag Lys	gag Glu	cag Gln	ttg Leu 145	gaa Glu	acg Thr	tcc Ser	agg Arg	cgg Arg 150	gag Glu	atg Met	atc Ile	ggg Gly	ctt Leu 155		544
caa Gln	gag Glu	aga Arg	gac Asp	agg Arg 160	cag Gln	ctg Leu	cag Gln	tgc Cys	aag Lys 165	aac Asn	agg Arg	agt Ser	ttg Leu	cat His 170	cag Gln	(	592
							gag Glu										640
gcc Ala	agc Ser	Arg 190	gct Ala	act Thr	cag Gln	tat Tyr	aat Asn 195	cat His	gat Asp	gtg Val	aag Lys	agg Arg 200	aag Lys	gag Glu	cgt Arg	1	688
gaa Glu	tat Tyr 205	aat Asn	aag Lys	cta Leu	aag Lys	gag Glu 210	cgc Arg	ctg Leu	cat His	cag Gln	ctc Leu 215	gtt Val	atg Met	aac Asn	aag Lys	•	736
aag Lys 220	gat Asp	aaa Lys	aac Asn	ata Ile	gcc Ala 225	atg Met	gat Asp	gtt Val	tta Leu	aat Asn 230	tat Tyr	gtg Val	ggt Gly	cga Arg	gct Ala 235	•	784

PATENT NO.

: 7,364,876 B2

Page 6 of 39

APPLICATION NO.: 10/644084

**DATED** 

: April 29, 2008

INVENTOR(S)

: Takai et al.

gat Asp	ggc Gly	aaa Lys	cga Arg	ggc Gly 240	tca Ser	tgg Trp	agg Arg	act Thr	gac Asp 245	aaa Lys	aca Thr	gaa Glu	gcc Ala	agg Arg 250	aat Asn	832
gaa Glu	gat Asp	gag Glu	atg Met 255	tac Tyr	aaa Lys	att Ile	ctg Leu	ttg Leu 260	aat Asn	gat Asp	tat Tyr	gag Glu	tac Tyr 265	cgc Arg	cag Gln	880
														cag Gln		928
atg Met	aag Lys 285	aag Lys	gag Glu	atg Met	atc Ile	tct Ser 290	ctc Leu	ctg Leu	tct Ser	cct Pro	cag Gln 295	aag Lys	aag Lys	aag Lys	Pro	976
														gat Asp		1024
gaa Glu	gat Asp	gac Asp	tct Ser	999 Gly 320	gaa Glu	ctg Leu	agc Ser	aga Arg	gac Asp 325	agc Ser	gtg Val	tgg Trp	ggc Gly	ctt Leu 330	tcc Ser	1072

PATENT NO.

: 7,364,876 B2

Page 7 of 39

APPLICATION NO.: 10/644084

**DATED** 

: April 29, 2008

INVENTOR(S)

: Takai et al.

tgt Cys	gac Asp	act	gtg Val 335	aga Arg	gag Glu	cag Gln	ctg Leu	aca Thr 340	aac Asn	agc Ser	atc Ile	agg Arg	aaa Lys 345	cag Gln	tgg Trp	1120
											aac Asn					1168
											atc Ile 375					1216
											att Ile					1264
				_	_	_	_			_	cag Gln	-	-	-		1312
											gac Asp					1360

PATENT NO.

: 7,364,876 B2

Page 8 of 39

APPLICATION NO.: 10/644084

**DATED** 

: April 29, 2008

INVENTOR(S)

: Takai et al.

						aaa Lys										1408
						gaa Glu 450										1456
						aag Lys										1504
gta Val	aag Lys	cag Gln	cag Gln	ttt Phe 480	tta Leu	aac Asn	atg Met	acg Thr	aac Asn 485	ttt Phe	gac Asp	cac His	cag Gln	aac Asn 490	tca Ser	1552
						agt Ser										1600
aat Asn	ctt Leu	ata Ile 510	gtc Val	cac His	tca Ser	cgg Arg	cca Pro 515	cgg Arg	caa Gln	aag Lys	aag Lys	cta Leu 520	cac His	agt Ser	gtg Val	1648

PATENT NO.

: 7,364,876 B2

Page 9 of 39

APPLICATION NO.: 10/644084

**DATED** 

: April 29, 2008

INVENTOR(S)

: Takai et al.

		cca Pro							1696
		act Thr							1744
		atc Ile 560						Lys	1792
		gca Ala							1840
		tcg Ser							1888

PATENT NO.

: 7,364,876 B2

Page 10 of 39

APPLICATION NO.: 10/644084

**DATED** 

: April 29, 2008

INVENTOR(S)

: Takai et al.

ttc agg agc gct cac ggg gac cga gat gac Phe Arg Ser Ala His Gly Asp Arg Asp Asp 605 610	tta cet taa atgtgeggge 1937 Leu Pro 615	7
tgcagtgctg ttcccagatg tgcgctagag gagttga	cac agggtgtagc ataaagtcag 199	7
tegtetaact taagatgete agagttgttt gtttgga	ctt cgctgtcttc ccccaaagag 205	7
ctgaaatgct aagctactta aaaggatgca aagcttt	ggt tgtgtgttag taacagaagc 211	7
ccctggctct gtgactgcag gaatgcatgg cgtttgg	atg gaaacagaag cgctggaatg 217	7
attgcctogc caggtaccga gaagagcact tttaggg	act ggttcctgta aacattaaat 2237	7
attogtocca agtgtggttg gcattggaag tgtagco	ttt acttgaatgt atactgtaga 229	7
tttttaacaa agcaggttct atatttatta tgtttag	tgt gattttggga ttacctcttt 2357	7
catatgtttt gtgtctgtac ataaatatac atgacta	tgt taagaggett taaggtttaa 2417	7
aaacttcaca ccatgettga gtatagcatt tcatqcc	aat taaaatqttt tcagtggcat 2477	7

PATENT NO.

: 7,364,876 B2

Page 11 of 39

APPLICATION NO.: 10/644084

**DATED** 

: April 29, 2008

INVENTOR(S)

: Takai et al.

It is certified that error appears in the above-identified patent and that said Letters Patent is hereby corrected as shown below:

ggtgtttaca	gaggttagga	ccactgccac	atgacagtta	agactttatt	tttaagccat	2537
ctgggcaata	aaaattcaaa	gccccttcat	aagctgagtt	cagataacta	gaactactaa	2597
cgttacattt	ttgagatttt	taaagcattg	tattttattt	tatatatgtg	aatgttataa	2657
tttctaagag	gaatattgat	tatggagtaa	tgggg			2692

<210>

<211> 615

Mus musculus

<400>

Met Gly Asp Trp Met Thr Val Thr Asp Pro Val Leu Cys Thr Glu Asn

Lys Asn Leu Ser Gln Tyr Thr Ser Glu Thr Lys Met Ser Pro Ser Ser

Leu Tyr Ser Gln Gln Val Leu Cys Ser Ser Val Pro Leu Ser Lys Asn

PATENT NO.

: 7.364.876 B2

Page 12 of 39

**DATED** 

APPLICATION NO.: 10/644084

INVENTOR(S)

: April 29, 2008 : Takai et al.

It is certified that error appears in the above-identified patent and that said Letters Patent is hereby corrected as shown below:

Val His Gly Val Phe Gly Val Phe Cys Thr Gly Glu Asn Ile Glu Gln

Ser Ile Ser Tyr Leu Asp Gln Glu Leu Thr Thr Phe Gly Phe Pro Ser

Leu Tyr Glu Glu Ser Lys Ser Lys Glu Ala Lys Arg Glu Leu Asn Ile

Val Ala Val Leu Asn Cys Met Asn Glu Leu Leu Val Leu Gln Arg Lys

Asn Leu Leu Ala Gln Glu Ser Val Glu Thr Gln Asn Leu Lys Leu Gly

Ser Asp Met Asp His Leu Gln Ser Cys Tyr Ala Lys Leu Lys Glu Gln

Leu Glu Thr Ser Arg Arg Glu Met Ile Gly Leu Gln Glu Arg Asp Arg

PATENT NO.

: 7,364,876 B2

Page 13 of 39

APPLICATION NO.: 10/644084

DATED

: April 29, 2008

INVENTOR(S)

: Takai et al.

It is certified that error appears in the above-identified patent and that said Letters Patent is hereby corrected as shown below:

Gln Leu Gln Cys Lys Asn Arg Ser Leu His Gln Leu Leu Lys Asn Glu 165

Lys Asp Glu Val Gln Lys Leu Gln Asn Ile Ile Ala Ser Arg Ala Thr 180

Gln Tyr Asn His Asp Val Lys Arg Lys Glu Arg Glu Tyr Asn Lys Leu 195 200

Lys Glu Arg Leu His Gln Leu Val Met Asn Lys Lys Asp Lys Asn Ile 210 215 220

Ala Met Asp Val Leu Asm Tyr Val Gly Arg Ala Asp Gly Lys Arg Gly 225 230 235 240

Ser Trp Arg Thr Asp Lys Thr Glu Ala Arg Asn Glu Asp Glu Met Tyr 245 250

Lys Ile Leu Leu Asn Asp Tyr Glu Tyr Arg Gln Lys Gln Ile Leu Met 260 265

PATENT NO.

: 7,364,876 B2

Page 14 of 39.

APPLICATION NO.: 10/644084

**DATED** 

: April 29, 2008

INVENTOR(S) : Takai et al.

> It is certified that error appears in the above-identified patent and that said Letters Patent is hereby corrected as shown below:

Glu Asn Ala Glu Leu Lys Lys Val Leu Gln Gln Met Lys Lys Glu Met 280

Ile Ser Leu Leu Ser Pro Gln Lys Lys Lys Pro Arg Glu Arg Ala Glu 295

Asp Gly Thr Gly Thr Val Ala Ile Ser Asp Ile Glu Asp Asp Ser Gly 315

Glu Leu Ser Arg Asp Ser Val Trp Gly Leu Ser Cys Asp Thr Val Arg 330

Glu Gln Leu Thr Asn Ser Ile Arg Lys Gln Trp Arg Ile Leu Lys Ser

His Val Glu Lys Leu Asp Asn Gln Ala Ser Lys Val His Ser Glu Gly

Leu Asn Glu Glu Asp Val Ile Ser Arg Gln Asp His Glu Gln Glu Thr

PATENT NO.

: 7,364,876 B2

Page 15 of 39

APPLICATION NO.: 10/644084

DATED

: April 29, 2008

INVENTOR(S)

: Takai et al.

It is certified that error appears in the above-identified patent and that said Letters Patent is hereby corrected as shown below:

Glu Lys Leu Glu Leu Glu Ile Glu Arg Cys Lys Glu Met Ile Lys Ala 385

Gln Gln Gln Leu Leu Gln Gln Gln Leu Ala Thr Thr Cys Asp Asp 405 410

Thr Thr Ser Leu Leu Arg Asp Cys Tyr Leu Leu Glu Glu Lys Glu Arg 420 425

Leu Lys Glu Glu Trp Thr Leu Phe Lys Glu Gln Lys Lys Asn Phe Glu 435 440

Arg Glu Arg Arg Ser Phe Thr Glu Ala Ala Ile Arg Leu Gly Leu Glu 450

Arg Lys Ala Phe Glu Glu Glu Arg Ala Ser Trp Val Lys Gln Gln Phe

Leu Asn Met Thr Asn Phe Asp His Gln Asn Ser Glu Asn Val Lys Leu 485 490

PATENT NO.

: 7,364,876 B2

Page 16 of 39

APPLICATION NO.: 10/644084

DATED

: April 29, 2008

INVENTOR(S)

: Takai et al.

It is certified that error appears in the above-identified patent and that said Letters Patent is hereby corrected as shown below:

Phe Ser Ala Phe Ser Gly Ser Ser Asp Pro Asp Asn Leu Ile Val His

Ser Arg Pro Arg Gln Lys Lys Leu His Ser Val Ala Asn Gly Val Pro

Ala Cys Thr Ser Lys Leu Thr Lys Ser Leu Pro Ala Ser Pro Ser Thr 530

Ser Asp Phe Arg Gln Thr His Ser Cys Val Ser Glu His Ser Ser Ile

Ser Val Leu Asn Ile Thr Pro Glu Glu Ser Lys Pro Ser Glu Val Ala

Arg Glu Ser Thr Asp Gln Lys Trp Ser Val Gln Ser Arg Pro Ser Ser 580

Arg Glu Gly Cys Tyr Ser Gly Cys Ser Ser Ala Phe Arg Ser Ala His 595 600

PATENT NO.

: 7,364,876 B2

Page 17 of 39

60

159

APPLICATION NO.: 10/644084

DATED

: April 29, 2008

INVENTOR(S)

: Takai et al.

It is certified that error appears in the above-identified patent and that said Letters Patent is hereby corrected as shown below:

Gly Asp Arg Asp Asp Leu Pro 610

<210> 3

<211> 3195

<212> DNA

<213> Rattus norvegicus

<220>

<221>

<222> (79) . . (1920)

**∢220>** 

<221> misc\_feature

<222> (2422) . . (2422)

"n"=any one base of a, t, c, or g <223>

<400> 3

gtaggagagt gacaggagct gttgtgcatg ccccagcact gaactgcctt ctcagggacc

ctggctctgg gactggct atg gga gat tgg atg act gtt aca gat cca gtt 111 Met Gly Asp Trp Met Thr Val Thr Asp Pro Val

ctg tgt aca gaa aac aaa aat ctc tct caa tat acc tca gaa aca aag Leu Cys Thr Glu Asn Lys Asn Leu Ser Gln Tyr Thr Ser Glu Thr Lys

PATENT NO.

: 7,364,876 B2

Page 18 of 39

**DATED** 

APPLICATION NO.: 10/644084 : April 29, 2008

INVENTOR(S)

: Takai et al.

	tct Ser															207
	tta Leu 45		_					_		_	_		_			255
	aac Asn		_	_	_		_			_	_	_	_			303
	ggt Gly															351
-	gag Glu		_		_	_		_		_	•			_		399
	ctt Leu	_		_			_	-	_	_	_				-	447
	ctg Leu 125	-	_		_	-	_	_		_	_	-	_		_	495

PATENT NO.

: 7,364,876 B2

Page 19 of 39

APPLICATION NO.: 10/644084

**DATED** 

: April 29, 2008

INVENTOR(S)

: Takai et al.

aaa Lys 140	ctt Leu	aag Lys	gaa Glu	cag Gln	ttg Leu 145	gag Glu	gcc Ala	tcc Ser	agg	cga Arg 150	gag Glu	atg Met	atc Ile	agc Ser	ctt Leu 155	į	543
					cag Gln												591
ctc Leu	ctg Leu	aaa Lys	aac Asn 175	gag Glu	aaa Lys	gaa Glu	gag .Glu	gta Val 180	caa Gln	aaa Lys	tta Leu	caa Gln	aat Asn 185	atc Ile	ata Ile	•	539
gcc Ala	agt Ser	cgg Arg 190	gct Ala	act Thr	cag Gln	tat Tyr	aat Asn 195	cat His	gat Asp	gtg Val	aag Lys	aga Arg 200	aag Lys	gag Glu	cgg Arg	•	587
gag Glu	tac Tyr 205	aat Asn	aaa Lys	ctg Leu	aag Lys	gag Glu 210	cgt Arg	ctg Leu	cat His	cag Gln	ctt Leu 215	gtt Val	atg Met	aac Asn	aag Lys	7	735
aag Lys 220	gat Asp	aaa Lys	aat Asn	ata Ile	gcc Ala 225	atg Met	gac Asp	gtt Val	tta Leu	aat Asn 230	tac Tyr	gtg Val	ggc Gly	cga Arg	gtg Val 235	7	783
gat Asp	gga Gly	aag Lys	cga Arg	ggc Gly 240	tcc Ser	tgg Trp	agg Arg	act Thr	gat Asp 245	aaa Lys	aca Thr	gaa Glu	gcc Ala	agg Arg 250	aat Asn	8	331

PATENT NO.

: 7,364,876 B2

Page 20 of 39

**APPLICATION NO. : 10/644084** 

**DATED** 

: April 29, 2008

INVENTOR(S)

: Takai et al.

_	gaa atg Glu Met 255	_	-	_			_	879
	atc ctg Ile Leu 270		Glu Le		Lys Va			927
	aaa gag Lys Glu							975
	aga gca Arg Ala	 -		-				1023
	gac gct Asp Ala			p Gly				1071
	act gtc Thr Val 335	 			-	 -		1119
	ctg aaa Leu Lys 350	 	Lys Le	_	Asn Gl		-	1167

PATENT NO.

: 7,364,876 B2

Page 21 of 39

APPLICATION NO.: 10/644084

**DATED** INVENTOR(S) : April 29, 2008 : Takai et al.

				cat His 370					gac Asp	1215
				aaa Lys						1263
				cag Gln						1311
	-			acc Thr						1359
			-	aaa Lys	-	 				1407
				gaa Glu 450						1455
				aag Lys						1503

PATENT NO.

: 7,364,876 B2

Page 22 of 39

APPLICATION NO.: 10/644084

DATED

: April 29, 2008

INVENTOR(S)

: Takai et al.

gtg Val	aag Lys	cag Gln	cag Gln	ttt Phe 480	tta Leu	aac Asn	atg Met	acg Thr	acc Thr 485	ttt Phe	gat Asp	cac His	cag Gln	aac Asn 490	tca Ser	1551
gaa Glu	aat Asn	gtg Val	aaa Lys 495	ctt Leu	ttc Phe	agt Ser	gcc Ala	ttt Phe 500	tca Ser	gga Gly	agt Ser	tct Ser	gat Asp 505	cca Pro	gac Asp	1599
aat Asn	ctt Leu	ata Ile 510	gtc Val	cac His	cca Pro	cgg Arg	cca Pro 515	cgg	caa Gln	aag Lys	aag Lya	cca Pro 520	cac	agt Ser	gtc Val	1647
gct Ala	aat Asn 525	ggg Gly	gtg Val	cca Pro	gct Ala	tgc Cya 530	aca Thr	tcc Ser	aaa Lys	ctg Leu	gct Ala 535	aag Lys	tct Ser	ctt Leu	ccg Pro	1695
acc Thr 540	tca Ser	cct Pro	tca Ser	gac Asp	ttc Phe 545	tgc Cya	ccg Pro	tct Ser	cgc Arg	tca Ser 550	tgt Cys	gtg Val	tct Ser	gag Glu	cac His 555	1743
agt Ser	Pro	gtc Val	agt Ser	gcg Ala 560	ctg Leu	act Thr	gtg Val	act Thr	ect Pro 565	gaa Glu	gaa Glu	acc Thr	aaa Lys	ccg Pro 570	aat Asn	1791
gag Glu	gtt Val	gga Gly	aga Arg 575	gaa Glu	agt Ser	acg Thr	gac Asp	cag Gln 580	aag Lys	tgg Trp	agc Ser	gtg Val	gtg Val 585	tcc Ser	aga Arg	1839

PATENT NO.

: 7,364,876 B2

Page 23 of 39

APPLICATION NO.: 10/644084

DATED

: April 29, 2008

INVENTOR(S)

: Takai et al.

Pro Ser Ser Arg Glu Gly Cys Tyr Gly Gly Cys Ser Ser Ala Tyr Thr 590 595 600	1887
agc tcc cac gtg gaa cga gat gac tta cca tag gtgctcgggc tgcagcgctg Ser Ser His Val Glu Arg Asp Asp Leu Pro 605 610	1940
teetggagtg catgagagga attgacaegg ggtgtageat aaagteagee atetaeegta	2000
agatgtogga gttatttgtt tggacttocc agtotttocc caaagagotg aaacgottta	2060
gaggatgcga aagctttggc tgtgtgttag taacagaagc ctctggctct gtgagtaaag	2120
gaatgtatgg tgtttggtgg gaaacaaaag cacgagaatg atttcctctt ccgggtactg	2180
agaatagcac ttttagggac tgattcttgt aaacattaaa tttttgtccc aagtatggtt	2240
ggcattggaa gtttagtctt tacttgaatg tacactgtag atttttaaca aagcagttct	2300
atatttatta tgtttagtgt gattttggga ttacctcttt catatgtttt ctgcctgtac	2360
ataaatatac atgactatgt taagaggctt taaggtttaa aaatttcaca ccatgctcga	2420
gnatagcatt tcatgccaat taaaatgttt tcagtggcat ggtgtttaca gatgtgttag	2480

PATENT NO.

: 7,364,876 B2

Page 24 of 39

**DATED** 

APPLICATION NO.: 10/644084

INVENTOR(S)

: April 29, 2008 : Takai et al.

gaccactgcc	acatgacagt	taagatttta	tttttaagcc	atttgggcaa	taaaaattca	2540
aagccacttc	ataagctaag	ttcagatagc	tasaactact	aacattacat	ttttgagatt	2600
tataaagcat	tatattttat	tttatatatg	tgactgttat	aatttctaag	aggaatgtgg	2660
attatgaagc	aatgggggaa	agacagaagt	gactaatagt	gcaagagcat	tgggtgaagg	2720
gacggctgat	gaggatatgg	gagacctggg	tggtgatctt	ttccttaccg	acggtgcggt	2780
gcggcgatct	ctgtaccgcc	agggctttct	atcattgcca	atacttttgt	aattaaagag	2840
attttcaact	acataccact	actaaagtaa	gacagtgtaa	aactttggct	tttgtaattg	2900
acactctgga	cactggtgtg	ttgttcattt	ctagaacaat	cgtaggetet	tttctctgtt	2960
tctgctgcat	gtttcttcat	gagaagtatg	ttactattga	cagtaatgac	actgacagtg	3020
actgtagacg	taggcccaga	cttctcctgg	gtggattttc	atccagcagc	ttttaagtgc	3080
ctcgccctgc	togtototge	acatageege	cgacacaagc	cctcgcttga	tgatgcagat	3140
agtccatctg	cctttctctc	cccttgccct	gctatgactg	ttgcattaaa	ttcat	3195

PATENT NO.

: 7,364,876 B2

Page 25 of 39

APPLICATION NO.: 10/644084

DATED

: April 29, 2008

INVENTOR(S)

: Takai et al.

It is certified that error appears in the above-identified patent and that said Letters Patent is hereby corrected as shown below:

<210>

<211> 613

<212> PRT

<213> Rattus norvegicus

<400>

Met Gly Asp Trp Met Thr Val Thr Asp Pro Val Leu Cys Thr Glu Asn

Lys Asn Leu Ser Gln Tyr Thr Ser Glu Thr Lys Met Ser Pro Ser Ser

Leu Tyr Ser Gln Gln Val Leu Cys Ser Ala Thr Pro Leu Ser Lys Asn

Val His Gly Val Phe Ser Ala Phe Cys Thr Gly Glu Asn Ile Glu Gln

Ser Ile Ser Tyr Leu Asp Gln Glu Leu Thr Thr Phe Gly Phe Pro Ser 65

Leu Tyr Glu Glu Ser Lys Ser Lys Glu Ala Lys Arg Glu Leu Ser Ile

PATENT NO.

: 7,364,876 B2

Page 26 of 39

**DATED** 

APPLICATION NO.: 10/644084 : April 29, 2008

INVENTOR(S)

: Takai et al.

It is certified that error appears in the above-identified patent and that said Letters Patent is hereby corrected as shown below:

Val Ala Leu Leu Asn Cys Met Asn Glu Leu Leu Val Leu Gln Arg Lys

Asn Leu Leu Ala Gln Glu Ser Val Glu Thr Gln Asn Leu Lys Leu Gly 120

Ser Asp Met Asp His Leu Gln Ser Cys Tyr Ala Lys Leu Lys Glu Gln 130 135 140

Leu Glu Ala Ser Arg Arg Glu Met Ile Ser Leu Gln Glu Arg Asp Arg 150 155

Gln Leu Gln Cys Lys Asn Arg Asn Leu His Gln Leu Leu Lys Asn Glu 165 170

Lys Glu Glu Val Gln Lys Leu Gln Asn Ile Ile Ala Ser Arg Ala Thr 180 190

Gln Tyr Asn His Asp Val Lys Arg Lys Glu Arg Glu Tyr Asn Lys Leu

PATENT NO.

: 7,364,876 B2

Page 27 of 39

APPLICATION NO.: 10/644084

DATED

: April 29, 2008

INVENTOR(S)

: Takai et al.

It is certified that error appears in the above-identified patent and that said Letters Patent is hereby corrected as shown below:

Lys Glu Arg Leu His Gln Leu Val Met Asn Lys Lys Asp Lys Asn Ile 210 215 220

Ala Met Asp Val Leu Asn Tyr Val Gly Arg Val Asp Gly Lys Arg Gly 225 240

Ser Trp Arg Thr Asp Lys Thr Glu Ala Arg Asn Glu Asp Glu Met Tyr

Lys Ile Leu Leu Asn Asp Tyr Glu Tyr Arg Gln Lys Gln Ile Leu Leu 260 265

Glu Asn Ala Glu Leu Lys Lys Val Leu Gln Gln Met Lys Lys Glu Met 275 280 285

Ile Ser Leu Leu Ser Pro Gln Lys Lys Lys Pro Arg Glu Arg Ala Glu 290

Asp Ser Thr Gly Thr Val Val Ile Ser Asp Val Glu Asp Asp Ala Gly 305 310 315 320

PATENT NO.

: 7,364,876 B2

Page 28 of 39

APPLICATION NO.: 10/644084

DATED

: April 29, 2008

INVENTOR(S)

: Takai et al.

It is certified that error appears in the above-identified patent and that said Letters Patent is hereby corrected as shown below:

Glu Leu Ser Arg Asp Gly Val Trp Ser Leu Ser Cys Asp Thr Val Arg 325

Glu Gln Leu Thr Asn Ser Ile Arg Lys Gln Trp Arg Ile Leu Lys Ser

His Val Glu Lys Leu Asp Asn Gln Ala Ser Lys Val His Ser Glu Gly

Phe His Glu Glu Asp Val Ile Ser Arg Gln Asp His Glu Gln Glu Thr 375 380

Glu Lys Leu Glu Leu Glu Ile Glu Arg Cys Lys Glu Met Ile Lys Ala 385 390 395

Gln Gln Gln Leu Leu Gln Gln Gln Leu Ala Thr Ala Cys Asp Asp 405 410

Thr Thr Ser Leu Leu Arg Asp Cys Tyr Leu Leu Glu Glu Lys Glu Arg 420 425

PATENT NO.

: 7,364,876 B2

Page 29 of 39

APPLICATION NO.: 10/644084

DATED

: April 29, 2008

INVENTOR(S)

: Takai et al.

It is certified that error appears in the above-identified patent and that said Letters Patent is hereby corrected as shown below:

Leu Lys Glu Glu Trp Ser Leu Phe Lys Glu Gln Lys Lys Asn Phe Glu 435

Arg Glu Arg Arg Ser Phe Thr Glu Ala Ala Ile Arg Leu Gly Leu Glu

Arg Lys Ala Phe Glu Glu Glu Arg Ala Ser Trp Val Lys Gln Gln Phe

Leu Asn Met Thr Thr Phe Asp His Gln Asn Ser Glu Asn Val Lys Leu 490

Phe Ser Ala Phe Ser Gly Ser Ser Asp Pro Asp Asn Leu Ile Val His 505

Pro Arg Pro Arg Gln Lys Lys Pro His Ser Val Ala Asn Gly Val Pro 515 520 525

Ala Cys Thr Ser Lys Leu Ala Lys Ser Leu Pro Thr Ser Pro Ser Asp 535 540

PATENT NO.

: 7,364,876 B2

Page 30 of 39

**DATED** 

APPLICATION NO.: 10/644084 : April 29, 2008

INVENTOR(S)

: Takai et al.

It is certified that error appears in the above-identified patent and that said Letters Patent is hereby corrected as shown below:

Phe Cys Pro Ser Arg Ser Cys Val Ser Glu His Ser Pro Val Ser Ala

Leu Thr Val Thr Pro Glu Glu Thr Lys Pro Asn Glu Val Gly Arg Glu 570

Ser Thr Asp Gln Lys Trp Ser Val Val Ser Arg Pro Ser Ser Arg Glu 585

Gly Cys Tyr Gly Gly Cys Ser Ser Ala Tyr Thr Ser Ser His Val Glu 600

Arg Asp Asp Leu Pro 610

<210> 5

<211> 22

<212> DNA

<213> Artificial Sequence

PATENT NO.

: 7,364,876 B2

Page 31 of 39

APPLICATION NO.: 10/644084

**DATED** INVENTOR(S) : April 29, 2008 : Takai et al.

It is certified that error appears in the above-identified patent and that said Letters Patent is hereby corrected as shown below:

<220>

an artificially synthesized primer sequence <223>

<400> 5

cgtaggagag tgacaggagc tg

22

<210>

<211>

<212>

<213> Artificial Sequence

<220>

<223> an artificially synthesized primer sequence

<400>

ggttatcgag tttttctaca tgac

<210>

<212>

Artificial Sequence <213>

<220>

<223> an artificially synthesized primer sequence

PATENT NO.

: 7,364,876 B2

Page 32 of 39

APPLICATION NO.: 10/644084

**DATED** 

: April 29, 2008

INVENTOR(S)

: Takai et al.

It is certified that error appears in the above-identified patent and that said Letters Patent is hereby corrected as shown below:

<400> 7

cgtaggagag tgacaggagc tg

22

<210> 8

<211> 23

<212> DNA

<213> Artificial Sequence

<220>

<223> an artificially synthesized primer sequence

<400>

ttcctgtttt tgcactgtag ctg

23

<210>

<211> 626

<212> PRT

<213> Homo sapiens

PATENT NO.

: 7,364,876 B2

Page 33 of 39

APPLICATION NO.: 10/644084

DATED

: April 29, 2008

INVENTOR(S)

: Takai et al.

It is certified that error appears in the above-identified patent and that said Letters Patent is hereby corrected as shown below:

<400>

Thr Ser Ser Ser Gly Ile Leu Ala Leu Glu Ile Ala Met Gly Asp Trp

Met Thr Val Thr Asp Pro Gly Leu Ser Ser Glu Ser Lys Thr Ile Ser

Gln Tyr Thr Ser Glu Thr Lys Met Ser Pro Ser Ser Leu Tyr Ser Gln 40

Gln Val Leu Cys Ser Ser Ile Pro Leu Ser Lys Asn Val His Ser Phe

Phe Ser Ala Phe Cys Thr Glu Asp Asn Ile Glu Gln Ser Ile Ser Tyr

Leu Asp Gln Glu Leu Thr Thr Phe Gly Phe Pro Ser Leu Tyr Glu Glu

Ser Lys Gly Lys Glu Thr Lys Arg Glu Leu Asn Ile Val Ala Val Leu 105

PATENT NO.

: 7,364,876 B2

Page 34 of 39

APPLICATION NO.: 10/644084

DATED INVENTOR(S) : April 29, 2008 : Takai et al.

It is certified that error appears in the above-identified patent and that said Letters Patent is hereby corrected as shown below:

Asn Cys Met Asn Glu Leu Leu Val Leu Gln Arg Lys Asn Leu Leu Ala 115

Gln Glu Asn Val Glu Thr Gln Asn Leu Lys Leu Gly Ser Asp Met Asp 130

His Leu Gln Ser Cys Tyr Ser Lys Leu Lys Glu Gln Leu Glu Thr Ser 145 150

Arg Arg Glu Met Ile Gly Leu Gln Glu Arg Asp Arg Gln Leu Gln Cys

Lys Asn Arg Asn Leu His Gln Leu Leu Lys Asn Glu Lys Asp Glu Val

Gln Lys Leu Gln Asn Ile Ile Ala Ser Arg Ala Thr Gln Tyr Asn His

Asp Met Lys Arg Lys Glu Arg Glu Tyr Asn Lys Leu Lys Glu Arg Leu

PATENT NO.

: 7,364,876 B2

Page 35 of 39

**DATED** 

APPLICATION NO.: 10/644084

INVENTOR(S)

: April 29, 2008 : Takai et al.

It is certified that error appears in the above-identified patent and that said Letters Patent is hereby corrected as shown below:

His Gln Leu Val Met Asn Lys Lys Asp Lys Lys Ile Ala Met Asp Ile

225

Leu Asn Tyr Val Gly Arg Ala Asp Gly Lys Arg Gly Ser Trp Arg Thr

Gly Lys Thr Glu Ala Arg Asn Glu Asp Glu Met Tyr Lys Ile Leu Leu

Asn Asp Tyr Glu Tyr Arg Gln Lys Gln Ile Leu Met Glu Asn Ala Glu 275 280

Leu Lys Lys Val Leu Gln Gln Met Lys Lys Glu Met Ile Ser Leu Leu 290

Ser Pro Gln Lys Lys Lys Pro Arg Glu Arg Val Asp Asp Ser Thr Gly 305 310 320

PATENT NO.

: 7.364,876 B2

Page 36 of 39

APPLICATION NO.: 10/644084

DATED

: April 29, 2008

INVENTOR(S)

: Takai et al.

It is certified that error appears in the above-identified patent and that said Letters Patent is hereby corrected as shown below:

Thr Val Ile Ser Asp Val Glu Glu Asp Ala Gly Glu Leu Ser Arg Glu 325 330 335

Ser Met Trp Asp Leu Ser Cys Glu Thr Val Arg Glu Gln Leu Thr Asn 340

Ser Ile Arg Lys Gln Trp Arg Ile Leu Lys Ser His Val Glu Lys Leu 355

Asp Asn Gln Val Ser Lys Val His Leu Glu Gly Phe Asn Asp Glu Asp 375

Val Ile Ser Arg Gln Asp His Glu Gln Glu Thr Glu Lys Leu Glu Leu 385 395

Glu Ile Gln Gln Cys Lys Glu Met Ile Lys Thr Gln Gln Gln Leu Leu 410

Gin Gin Gin Leu Ala Thr Ala Tyr Asp Asp Asp Thr Thr Ser Leu Leu 420 430

PATENT NO.

: 7,364,876 B2

Page 37 of 39

APPLICATION NO.: 10/644084

DATED

: April 29, 2008

INVENTOR(S)

: Takai et al.

It is certified that error appears in the above-identified patent and that said Letters Patent is hereby corrected as shown below:

Arg Asp Cys Tyr Leu Leu Glu Glu Lys Glu Arg Leu Lys Glu Glu Trp 435

Ser Leu Phe Lys Glu Gln Lys Lys Asn Phe Glu Arg Glu Arg Arg Ser

Phe Thr Glu Ala Ala Ile Arg Leu Gly Leu Glu Arg Lys Ala Phe Glu

Glu Glu Arg Ala Ser Trp Leu Lys Gln Gln Phe Leu Asn Met Thr Thr

Phe Asp His Gln Asn Ser Glu Asn Val Lys Leu Phe Ser Ala Phe Ser

Gly Ser Ser Asp Trp Asp Asn Leu Ile Val His Ser Arg Gln Pro Gln

Lys Lys Pro His Ser Val Ser Asn Gly Ser Pro Val Cys Met Ser Lys 530

PATENT NO.

: 7,364,876 B2

Page 38 of 39

APPLICATION NO.: 10/644084

DATED

: April 29, 2008

INVENTOR(S)

: Takai et al.

It is certified that error appears in the above-identified patent and that said Letters Patent is hereby corrected as shown below:

Leu Thr Lys Ser Leu Pro Ala Ser Pro Ser Thr Ser Asp Phe Cys Gln 545 550

Thr Arg Ser Cys Ile Ser Glu His Ser Ser Ile Asn Val Leu Asn Ile

Thr Ala Glu Glu Ile Lys Pro Asn Gln Val Gly Glu Cys Thr Asn

Gln Lys Trp Ser Val Ala Ser Arg Pro Gly Ser Gln Glu Gly Cys Tyr

Ser Gly Cys Ser Leu Ser Tyr Thr Asn Ser His Val Glu Lys Asp Asp

Leu Pro 625

PATENT NO.

: 7,364,876 B2

Page 39 of 39

DATED

APPLICATION NO.: 10/644084

INVENTOR(S)

: April 29, 2008 : Takai et al.

It is certified that error appears in the above-identified patent and that said Letters Patent is hereby corrected as shown below:

In claim 3, at column 53, line 22, please delete "claim 1" and insert therefor --claim 2--.

In claim 4, at column 54, line 17, please delete "supernatant" and insert therefor --supernatant--.

Signed and Sealed this

Twenty-fourth Day of February, 2009

JOHN DOLL Acting Director of the United States Patent and Trademark Office